

021704
17698
U.S. PTO

PTO/SB/05 (08-03)

Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

| | |
|------------------------|----------------------------------|
| Attorney Docket No. | BP2431 |
| First Inventor | Dr. Gottfried Ungerboeck |
| Title | Zero excess bandwidth modulation |
| Express Mail Label No. | EV 082608841 US |

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)

2. Applicant claims small entity status.
See 37 CFR 1.27.

3. Specification [Total Pages 41]
(preferred arrangement set forth below)

- Descriptive title of the invention
- Cross Reference to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to sequence listing, a table, or a computer program listing appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

4. Drawing(s) (35 U.S.C. 113) [Total Sheets 13]

5. Oath or Declaration [Total Sheets 2]

- a. Newly executed (original or copy)
- b. Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 18 completed)
 - i. **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

6. Application Data Sheet. See 37 CFR 1.76

7. CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)

8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)

- a. Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
 - i. CD-ROM or CD-R (2 copies); or
 - ii. Paper
- c. Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. Assignment Papers (cover sheet & document(s))

10. 37 CFR 3.73(b) Statement Power of Attorney
(when there is an assignee)

11. English Translation Document (if applicable)

12. Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS Citations

13. Preliminary Amendment

14. Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)

15. Certified Copy of Priority Document(s)
(if foreign priority is claimed)

16. Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.

17. Other: 1. Letter of Authorization
2. PTO-2038 Forms for \$842 and \$40

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

 Continuation Divisional Continuation-in-part (CIP) of prior application No.:

Prior application information: Examiner _____ Art Unit: _____
 For CONTINUATION OF DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference.
 The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS
 Customer Number: 34399 OR Correspondence address below

| | | | |
|----------|---|-----------|----------------|
| Name | Garlick Harrison & Markison LLP | | |
| Address | P.O. Box 160727 ATTN: Shayne X. Short, Ph.D. | | |
| City | Austin | State | Texas |
| Country | USA | Telephone | (512) 825-1145 |
| Zip Code | 78716-0727 | | |
| Fax | (512) 394-0054 | | |

| | | | |
|-------------------|------------------------|-----------------------------------|------------|
| Name (Print/Type) | Shayne X. Short, Ph.D. | Registration No. (Attorney/Agent) | 45,105 |
| Signature | <i>Shayne X. Short</i> | Date | 02/17/2004 |

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

17497 U.S. PTO
10/779825

021704

Please type a plus sign (+) inside this box

PTO/SB/17 (11_00)
Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$) \$882.00

Complete if Known

| | |
|----------------------|--------------------------|
| Application Number | |
| Filing Date | |
| First Named Inventor | Dr. Gottfried Ungerboeck |
| Examiner Name | |
| Group Art Unit | |
| Atty Docket No. | BP2431 |

METHOD OF PAYMENT

1. The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number

Deposit Account Name

Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17

Applicant claims small entity status. See 37 CFR 1.27

2. Payment Enclosed:

Check Credit card Money Order Other

FEE CALCULATION

1. BASIC FILING FEE

| Fee Description | Fee Paid |
|------------------------|-----------------------|
| Utility filing fee | 770.00 |
| Design filing fee | |
| Plant filing fee | |
| Reissue filing fee | |
| Provisional filing fee | |
| SUBTOTAL(1) | (\$) \$770.00 |

2. EXTRA CLAIM FEES

Fee From Below

| | Extra Claims | Fee Paid |
|--------------------|-------------------|----------|
| Total Claims | 24 -20** 4 X 18 = | 72.00 |
| Independent Claims | 2 -3** -1 X 86 = | 0.00 |
| Multiple Dependent | | |

Fee Description

Claims in excess of 20

Independent claims in excess of 3

**Reissue independent claims over original patent

**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) **(\$) 72.00**

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3.. ADDITIONAL FEES

Fee Description

Surcharge-late filing fee or oath
Surcharge- late provisional filing fee or or cover sheet

Non-english specifications

For filing a request for ex parte reexamination
Requesting publication of SIR prior to Examiner action

Requesting publication of SIR after Examiner action

Extension for reply within first month

Extension for reply within second month

Extension for reply within third month

Extension for reply within fourth month

Extension for reply within fifth month

Notice of Appeal

Filing a brief in support of appeal

Request for oral hearing

Petition to institute a public use proceeding

Petition to revive - unavoidable

Petition to revive unintentional

Utility Issue Fee (or reissue)

Design Issue Fee

Plant Issue Fee

Petitions to the Commissioner

Processing fee under 37 CFR 1.17(q)

Submissions of Information Disclosure Stmt

Recording each patent assignment per property (times number of properties)

\$40.00

Filing a submission after final rejection (37 CFR 1.129(a))

For each additional invention to be examined (37 CFR 1.129(b))

Request for Continued Examination (RCE)

Request for expedited Examination of design applicat

Other fee (specify) _____

Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

\$40.00

SUBMITTED BY

Complete (if applicable)

| | | | | | |
|-------------------|------------------------|--------------------------------------|--------|-----------|----------------|
| Name (Print Type) | Shayne X. Short, Ph.D. | Registration No. (Attorney/Agent) | 45,105 | Telephone | (512) 825-1145 |
|-------------------|------------------------|--------------------------------------|--------|-----------|----------------|

| | | | |
|-----------|---|------|-----------|
| Signature |  | Date | 2/17/2004 |
|-----------|---|------|-----------|



BROADCOM CORPORATION
16215 Alton Parkway
Irvine, California 92618

Phone: 949-450-8700
Fax: 949-450-8710

May 20, 2003

To whom it may concern:

I, Henry Samueli, hereby authorize Dee Henderson, Intellectual Property Portfolio Manager, to execute documents relating to US and foreign patent and trademark matters on behalf of Broadcom Corporation and/or its subsidiaries.

A handwritten signature in black ink, appearing to read "Henry Samueli".

Henry Samueli, Ph.D.
Chief Technical Officer and Co-Chairman